

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A focus control apparatus for controlling focus of a laser beam emitted to reproduce information onto an optical disk in which a plurality of recording layers are formed, on the basis of a focus error signal indicative of a deviation amount of ~~said~~the laser beam from a focus state in any of ~~said~~the recording layers, comprising:

a light emitting device provided to emit the laser beam;

a driver configured to drive the light emitting device in accordance with a drive signal;

a servo controller configured to apply the drive signal having an acceleration pulse or a deceleration pulse to the driver to make a focus jump from a first recording layer to a second recording layer;~~jump-signal-applying means, at the time of making a focus jump from a recording layer to another recording layer, for applying a brake signal for making a focus jump serving as a drive signal for controlling driving of a light emitting means which is preliminarily provided to emit said laser beam; and~~

a processor configured to determine whether a level of the focus error signal for the second recording layer reaches a predetermined value for the second recording layer and to lower the predetermined value in the case where the level of the focus error signal does not reach the predetermined value;~~timing-setting means for variably setting a timing of applying said brake signal by said jump signal applying means on the basis of level of said focus error signal of said recording layer as an object of the focus jump;~~

~~wherein said timing setting means includes:~~

~~level-determining means for determining whether the level of said focus error signal of said recording layer as an object of a focus jump reaches a level specifying the timing of said focus jump or not; and~~

~~level-varying means for lowering said specification level in the case where said level determining means determines that the level of said focus error signal does not reach said specification level; and~~

wherein ~~said brake signal is applied by said jump signal applying means at the time when~~
~~said level determining means~~the servo controller applies the drive signal as a
deceleration pulse to the driver in the case where the processor determines that
the level of said~~the~~ focus error signal reaches said~~specification level~~the
predetermined value.

2. (Cancelled)

3. (Currently Amended) The focus control apparatus according to claim 1,

wherein ~~said brake signal includes an~~the acceleration pulse signal is applied for starting
~~acceleration regarding the~~a focus jump and ~~an~~the deceleration pulse signal is
applied for starting deceleration,

wherein the deceleration pulse to be applied within a specific time-out period after
application of ~~said~~the acceleration pulse-signal, and

~~said level determining means~~wherein the processor determines whether the level of
said~~the~~ focus error signal reaches said~~specification level~~the predetermined value
within ~~said~~the specific time-out period or not.

4. (Currently Amended) The focus control apparatus according to claim 3, wherein ~~said~~the
specific time-out period is set on the basis of a period in which ~~said another~~the second
recording layer as a destination of the focus jump can be irradiated with ~~said~~the laser beam.

5. (Currently Amended) An optical disk drive comprising:

a focus controller for controlling focus of a laser beam emitted to reproduce information
onto an optical disk in which a plurality of recording layers are formed, on the
basis of a focus error signal indicative of a deviation amount of the laser beam
from a focus state in any of ~~said~~the recording layers ~~of said laser beam~~; and
~~light irradiating means~~a light emitting device for irradiating ~~said~~the optical disk with
said~~the~~ laser beam,

wherein ~~said~~the focus controller includes:

a driver configured to drive the light emitting device in accordance with a drive signal;

a servo controller configured to apply the drive signal having an acceleration pulse or a
deceleration pulse to the driver to make a focus jump from a first recording layer

~~to a second recording layer; jump-signal applying means, at the time of allowing said laser beam emitted to make a focus jump from a recording layer to another recording layer, for applying a brake-signal for making the focus jump serving as a drive signal for controlling driving of a light-emitting means; and~~

~~a processor configured to determine whether a level of the focus error signal for the second recording layer reaches a predetermined value and to lower the predetermined value in the case where the level of the focus error signal does not reach the predetermined value; timing-setting means for variably setting a timing of applying said brake-signal by said jump-signal applying means on the basis of level of said focus error signal of said recording layer as an object of the focus jump;~~

~~wherein said timing-setting means includes:~~

~~level-determining means for determining whether the level of said focus error signal of said recording layer as an object of a focus jump reaches a level specifying the timing of said focus jump or not; and~~

~~level-varying means for lowering said specification level in the case where said level-determining means determines that the level of said focus error signal does not reach said specification level; and~~

~~wherein said brake-signal is applied by said jump-signal applying means at the time when said level-determining means~~the servo controller applies the drive signal as a deceleration pulse to the driver in the case where the processor determines that the level of said~~the focus error signal reaches said specification level~~the predetermined value.

6. (Currently Amended) A focus control method for controlling focus of a laser beam emitted to reproduce information onto an optical disk in which a plurality of recording layers are formed, on the basis of a focus error signal indicative of a deviation amount of the laser beam from a focus state in any of ~~said~~the recording layers of ~~said laser beam~~, comprising:

~~a jump~~an accelerating signal applying step of, ~~at the time of allowing said laser beam emitted to make a focus jump from a recording layer to another recording layer,~~
~~applying a brake-signal~~an acceleration pulse to a light emitting device configured to emit the laser beam so as to start a focus jump of the light emitting device from

~~a first recording layer toward a second recording layer for the focus jump serving as a drive signal for controlling driving of a light emitting device which is preliminarily provided to emit said laser beam; and~~
~~a timing setting step of variably setting a timing of applying said brake signal by said jump signal applying step on the basis of level of said focus error signal of said recording layer as an object of the focus jump,~~
~~wherein said timing setting step includes:~~
~~a level determining step of determining whether the level of said the focus error signal of said recording layer as an object of the focus jump for the second recording layer reaches level specifying the timing of said focus jump a predetermined value or not; and~~
~~a level varying step of lowering said specification level in the case where the determination made in said level determining step that the level of said focus error signal does not reach said specification level,~~
~~wherein said brake signal is applied by said jump signal applying step at the time when a decelerating signal applying step of applying a deceleration pulse to the light emitting device in the case where it is determined in said the level determining step that the level of said the focus error signal reaches said specification level the predetermined value; and~~
~~a level varying step of lowering the predetermined value in the case where it is determined in the level determining step that the level of the focus error signal does not reach the predetermined value.~~

7. (Cancelled)

8. (Currently Amended) The focus control method according to claim 6,

~~wherein said brake signal includes an acceleration pulse signal for starting acceleration regarding the focus jump and a the deceleration pulse signal for starting deceleration to be applied within for a specific time-out period after application of said the acceleration pulse signal, and~~

wherein ~~said~~the level determining step determines whether the level of ~~said~~the focus error signal reaches ~~said~~ ~~specification level~~ the predetermined value within ~~said~~the specific time-out period or not.

9. (Currently Amended) The focus control method according to claim 8, wherein ~~said~~the specific time-out period is set on the basis of a period in which ~~said~~ ~~another~~ the second recording layer as a destination of the jump can be irradiated with ~~said~~the laser beam.